

# A World of Colour and Bright Shining Surfaces: Experiences of Plastics after the Second World War

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Covering the years of the Second World War and up to the mid-1970s, this article delineates shifts in the meanings of plastics, drawing from publications aimed at a general reader, advertisements from interior design magazines and early market research reports from the Hagley Library, Wilmington, Delaware. Plastics had already acquired a 'double' character—both advanced and inauthentic—and these years saw enormous expansion in the consumption of plastic goods, which were heavily promoted by the industry for the 'wipe-clean' hygiene that derived from their sheer surfaces. The article discusses the qualities of these surfaces and the implications of their frequent characterisation to consumers as vehicles for a bright colourful post-war life. Consumers' direct experiences of plastics' infinitely specifiable surfaces were implicated in a development of the more negative side of their character by the mid-1960s, along with growing awareness of the effects of everyday chemicals on the environment. This article adds to the existing literature that focuses on plastics as an element of the history of business and technology.

**Keywords:** Britain—consumer products—consumption—modernity—plastics

## Introduction

When an industrial designer uses plastics to the best advantage, he achieves economy of weight and a new smoothness of surface, and if he should employ transparent or translucent materials, the shapes he devises melt into partnership with light, natural or artificial, thus attaining a wholly new decorative quality.<sup>1</sup>

What did plastic<sup>2</sup> materials signify in the West<sup>3</sup> in the mid-twentieth century, 1941–1975? How were the properties of their surfaces, their gloss and smoothness, what they looked like and what they felt like, relevant to the meanings that they accrued? To pin down 'what plastic materials signified' is something of a tall order, given the difficulties that confront what is in effect a historical study of sensory experiences. This problem is compounded by the probable lack of salience of plastics, in themselves, to the ways in which such experiences might be interpreted by a person having them—a plastic object is likely to be understood through its performance as a *product*, rather than its qualities a *plastic* product. The experience of the material is necessarily buried among experiences of the world of goods in general. Historical sources can provide particular insights about plastics' significance, by focusing on the qualities of their surfaces, both as these qualities were promoted by manufacturers and opinion formers and as they were received by consumers. This can be done by drawing from publications that promoted plastics as materials, and *in* plastic products, as well as on evidence from early user research, which shows that the sensual apprehension of plastic surfaces had lasting consequences for what the materials signified to consumers.<sup>4</sup>

One objective here is to demonstrate that thinking about plastic in terms of the qualities of its surfaces provides new insights into the way it came into its identity in the years after the Second World War. It does this by focusing on the ways in which its *actual* fluidity provided the ground for a contest between competing readings of plastics, focusing on the ways in which the qualities of plastic surfaces were represented by producers, and were received by consumers. In this it is distinct from previous work orientated towards business and economic history such as Meikle's *American Plastic*, Friedel's *Pioneer Plastic* or Fenichell's *The Making of a Synthetic Century*, and it does not focus primarily on the relationship between plastics and design seen in, for instance, Katz, Sparke and Whiteley's work.<sup>5</sup> While this work has traced the development of plastics and approaches to their use in design—as replacements for other materials and in ‘plastic as plastic’—a focus on plastic surfaces has been largely absent, along with insights into the materiality of consumers’ engagement with them.

Some ideas introduced in the author’s previous work can redress this, particularly the importance of touch in the apprehension of plastic surfaces,<sup>6</sup> revisited in the light of contemporary concerns about plastic’s toxicity<sup>7</sup> and Elizabeth Shove’s identification of plastic’s ‘generic identities’<sup>8</sup> in her narrative of its historical development. Whereas for Shove these identities are relevant for its use by designers for products and environments that are part of everyday life, here the focus is on consumers’ apprehension of them—their ‘sensory identity’. It is difficult to gauge this from historical sources, but the attention given to plastics by the authors mentioned above can be built upon, in the spirit of the attention to the senses that has emerged in various fields.

As David Howes put it, ‘An intense new focus on the cultural life of the senses is sweeping the human sciences and crossing over into other disciplines’<sup>9</sup>—a concern for plastic’s look and feel implies a concern for both the senses through which this is apprehended, sight and touch. The concerns of the ‘sensory anthropology’ developed by Constance Classen and others<sup>10</sup> have crossed over into design, most notably in the work of Juhani Pallasmaa,<sup>11</sup> who outlines the sensorial ‘polyphony’ through which architecture is experienced using the whole body: ‘Even the eye touches; the gaze implies an unconscious touch, bodily mimesis and identification.’<sup>12</sup> This sensuality is not a purely mechanical relationship between people and things but is the basis on which their meaning is built—as Pallasmaa puts it, ‘the sensed and the imagined fuse together’.<sup>13</sup> So the apprehension of plastic surfaces involves both their materiality and the ideas that they invoke. From the point of view of such ideas the mid-twentieth century is a particularly appropriate moment to select from plastic’s 150-year history. This choice of periodization derives also from the effect of the Second World War on polymer technology<sup>14</sup> and the subsequent development of markets for the monomer chemicals that are by-products of oil refining, as the raw materials for plastic through the 1940s and 1950s.

Plastic has a significant place in mid-twentieth century material culture in the developed world, its popularisation coinciding with and to an extent characterising consumption in that period, being taken up for both disposable everyday wares and in high design. As Martin Hand and Elizabeth Shove put it, ‘In the 1950s, new materials (plastics; enamelled metal; colour) were presented as the vanguard of *modern* science and engineering and of *modernist* style.’<sup>15</sup> A relationship can therefore be made between plastic and conceptions of modernity. The curators of the Du Pont archive at Wilmington, Delaware, characterise synthetic plastics as quintessentially “new” material(s),<sup>16</sup> implying that they can be taken as the characteristic materials of twentieth-century modernity. In epochal terms, the invention of synthetic plastics did coincide with the crystallisation of modernity in cultural, economic and industrial forms that

is characterised by novelty in all these spheres. Beyond its association with novelty, plastic's 'plasticity', the quality that Barthes identified as 'the very idea of its infinite transformation' and 'less a thing than a trace of a movement',<sup>17</sup> is congruent with the fluidity and relativism ascribed to late modernity by theorists such as Giddens and Bauman.<sup>18</sup>

It has become almost a cliché to remark on plastic's fluidity, its 'Protean' character. Hyatt, the American inventor of celluloid, promoted it in these terms as early as 1878.<sup>19</sup> The analogy with changeable Proteus remains useful and this article focuses on a period when particular meanings distilled out of the polyvalent possibilities of plastics—as other writers have observed<sup>20</sup> it was in the mid-twentieth century that the now dominant understandings of plastic emerged. The middle of the twentieth century saw developments in synthetic polymer chemistry in the decade before the Second World War,<sup>21</sup> their application to production processes for military purposes during the war, and the promotion of these new materials in civilian consumption and their widespread adoption, in the decades following it. Along with these developments in formulations and applications of plastic went developments in its characterisation by producers and their interpretation by consumers, which remain as the backdrop to its contemporary 'double' character; plastic can be both the focus of delight in consumption and of fear of its environmental consequences.

The gleam/brightness of new plastic surfaces and the cloudy, dead-eyed, scummy aspect they acquire as they age are familiar signals of this dual identity. In 1945 John Gloag summed up the process of plastic's ageing, and the effects of this on its 'shine': 'sooner or later the surface [...] becomes dulled, sometimes due to shrinkage and sometimes due to slight absorption of water, either of which will cause minute surface flaws or irregularities resulting in loss of brilliance.'<sup>22</sup>

The shifts that took place in the meanings of plastic in the middle of the twentieth century meant that some negative aspects of their character became less visible—they went from being the stuff of imitation in the 1950s, to being valued in their own right as the materials of fashionable design—but at the same time they acquired some negative associations in the popular consciousness, which can be summed up as 'chemophobia'.<sup>23</sup> These shifts look like examples of what Madeleine Akrich and other writers in the field of Science and Technology Studies call the 'stabilization' of a technology, particularly given their persistence into the present. As Akrich puts it, 'once technical objects are stabilized, they become instruments of knowledge',<sup>24</sup> and in this case the result of the processes of stabilization is our contemporary 'folk knowledge' of plastic, which gives it a double identity as simultaneously technically advanced and somewhat dubious.

The discussion below of the development of this folk knowledge is introduced through two bodies of material that can safely be assumed to have a more or less direct relationship to it. The first is a body of adverts and editorials from *Ideal Home*<sup>25</sup> magazine, and the second is a body of market research reports for the design of plastic food storage containers by an American packaging designer, Irv Koons, for the Dixie Cup Co. from 1974.<sup>26</sup> In both, the qualities of plastic surfaces that are accessible to sight and touch, shininess among them, are significant. In the adverts, a positive construction is put on these qualities, whereas in the Irv Koons material it is clear that his focus-group participants took a rather more equivocal message from their direct experience of plastic surfaces. Today this is expressed as a distaste for plastic detritus, or among the informed as 'plastiphobia'.<sup>27</sup> Before considering this material it is appropriate to outline some efforts to stabilize the identity of plastics that derived from the plastics industry

and from attempts to educate the public about the materials that contain significant references to the qualities of their surfaces.

## War-time fantasy: a bright shiny plastic utopia

Plastics producers have promoted the materials in an organised way since the formation in 1937 of the Society of the Plastics Industry (SPI) to represent the interests of the American industry.<sup>28</sup> The records of the SPI Public Relations Committee show that by the 1940s, there were clear negative associations with plastics, that gave the sales team of the Hoover company an 'antipathy' towards them as components of their products.<sup>29</sup> In the UK such attitudes, relative ignorance of the materials and their clear potential for use in consumer products after the war influenced the way the materials were promoted, resulting in literature for the general reader.

Most notable among the early publications of this sort in the UK were by industrial chemists V. E. Yarsley and E. G. Couzens, and the design historian John Gloag. Yarsley and Couzens collaborated on a series of books about plastics published under Penguin Books' 'Pelican' imprint, which was initiated in 1937 to educate the public. These were *Plastics* (1941), *Plastics in the Service of Man* (1956) and *Plastics in the Modern World* of 1968, each adding detail about advances in the technology and introducing the reader to the chemistry of plastics, the plastics industry, methods of production and application.<sup>30</sup> The first book, *Plastics*, finished with a short chapter called 'Plastics and the Future', which reads at first as a summary overview of the preceding chapters, but concludes with a eulogy to plastic, or more precisely to the human being living in a world where plastics are the characteristic material of his environment. This 'Plastic Man', living in the 'plastic age' inhabits a 'world of colour and bright shining surfaces', his plasticized life completed by being laid to rest sealed in a plastic coffin.<sup>31</sup> Yarsley and Couzens' gendering of their imaginary plasticized human is characteristic of their time and reference to it here is not intended to obscure either the central role of women in the consumption of plastic goods, referred to below, or the plasticized humans that appear in more recent popular culture courtesy of, among others, Frank Zappa and Poly Styrene.<sup>32</sup>

While it has been Plastic Man's coffin that has caught the eye of commentators,<sup>33</sup> for this discussion it is the insights that Yarsley and Couzens' mid-twentieth century utopian fantasy gives into the qualities of plastic surfaces that is striking. For all that they focus on the facts of plastics' chemical origin and their physical properties, they present the materials' 'bright shining' surfaces as salient to their non-specialist readers. In 1941 it perhaps required their intimate knowledge of the industry and contemporary developments in applications of polymer chemistry to be able to see beyond the qualities of the plastics then available, towards the qualities of a world transformed by gleaming, smooth surfaces in the future. They were writing as technologists, conditioned by the command economy of war time, so it is understandable that they would assume that novel formulations of plastic would indeed transform the surfaces of the world. They show their technocratic view in the concluding words of the chapter, which suggest that the specifiable nature of plastic will bring about: 'a new, brighter, cleaner and more beautiful world, an environment not subject to the haphazard distribution of nations' resources but built to order, the perfect expression of the new spirit of planned scientific control, the Plastics Age.'<sup>34</sup>

They acknowledge the 'cold hygiene' in the potential of plastics technology to transform and control human material existence in a functional plastic future and they counter this with an emphasis on the *delight* available from plastic's surface qualities,

suggesting the reader remember that in this world ‘everywhere there is a riot of colour and every kind of surface from dull matt to a mirror-finish that circumstances demand’.<sup>35</sup> These sensual qualities are quite far from the way plastics seem to have played out in everyday life in the UK in the years after the war, circumscribed as it was by war damage, housing and material shortage, and rationing that continued from wartime until 1955. However, even in 1941, the hopeful possibility that the ‘bright shining surfaces’ of plastics would make this environment less drab aligned with the underlying demand for household goods that existed alongside rationing.<sup>36</sup>

Just as he is bound in plastic in the grave, the beginning of Plastic Man’s life-cycle also characterises the plastic age, in the materials’ ability to provide a safe environment for children. They have ‘no crevices to harbour dirt or germs’, and they can provide an almost weightless pram, and unbreakable feeding bottles. It is in their account of this phase of Plastic Man’s life that Yarsley and Couzens focus most on plastics’ characteristic surfaces, and they almost imply the materials have inherently childish qualities as they summon up an image of objects that are ‘brightly self-coloured and patterned with every design to please his childish mind’, and that provide a ‘world of colour and bright shining surfaces’.<sup>37</sup> With hindsight, it is tempting to see this association between plastics’ qualities and childish delight as pointing forward to a world of relatively innocent consumerism in the 1950s.

It is possible also to see in this utopian vision other themes that appear in the public discourse found in post-war advertising and marketing material, as well as ways in which they are bound up with sensory engagement with plastic surfaces. As a child, Plastic Man wears ‘shoes of plastic and textiles covered with a plastic finish’ [...] ‘He sits in a new kind of schoolroom with shining unscuffable walls at a moulded desk, warm and smooth and clean to the touch’.<sup>38</sup> Here, *smoothness* clearly equates to *cleanliness*, the coherence of a surface to its hygiene, and while this is a natural extension of long-established expectations of ceramics and glass, direct experience of plastic surfaces in the post-war years meant this association did not remain unchallenged, as the market research evidence discussed below shows.

Although John Gloag’s 1945 *Plastics and Industrial Design* was published to ‘war economy standards’,<sup>39</sup> it nonetheless included over sixty high quality black and white illustrations. The text discusses the implications of the ‘limitless control of material’ that plastic seemed to offer, drawing from his other writings of this period,<sup>40</sup> and like them, promoting industrial design as a necessity in making the most of that limitless control. It is the illustrations that are most relevant to this discussion, as they indicate the visual qualities of the material that both the manufacturers and a design pundit like Gloag considered most striking—their ability to comprise objects that could be flexible, glossy and transparent; lucid—as he put it ‘to bring to the service of industry an array of new properties—new gifts of lightness, translucency, transparency, texture and colour’.<sup>41</sup> Gloag’s appreciation of plastics’ potential to brighten the world is reflected in aspects of the text that concentrate on both the materials’ physical properties and their role in public taste after the war. On the latter point, Gloag recognises that for all that they emerge from progressive science, plastics have no innate tendency to improve taste, but he offers the hope that whereas there is a risk that plastics will ‘create a new rococo period’<sup>42</sup> the experience of the ‘superb equipment’ of warfare will have had an educating effect on the public’s taste, somehow inoculating them against bad taste.

When it comes to what this educated public will actually experience in a world rendered more controllable by plastics, like Yarsley and Couzens, Gloag focuses on the optimism and confidence that *might* be embodied in the visual effects and tactile experiences

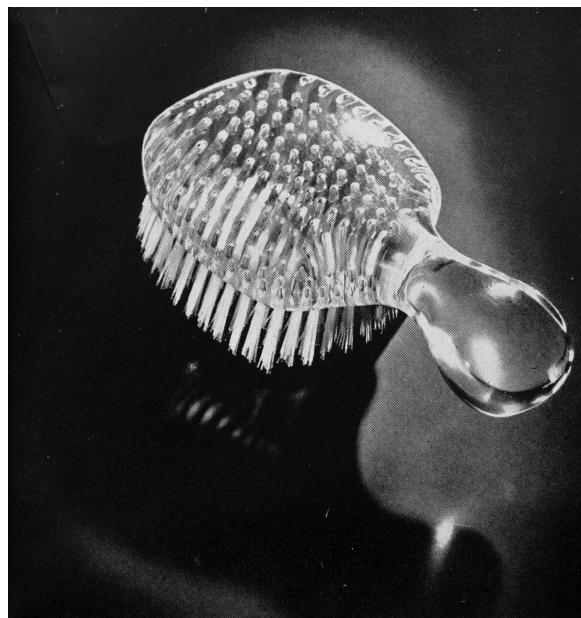
that plastics will afford, suggesting that: 'Women [ . . . ] who have helped to build Spitfires and Hurricanes, are likely to welcome light and easily cleaned equipment in their houses, and especially in their kitchens; they are going to appreciate the smooth translucent and gaily coloured plastics that will be available for the making of kitchen equipment and furniture [ . . . ].'<sup>43</sup>

Gloag's comments here point forward to the important role that women would have in the increasingly aestheticized consumption of the post-war period<sup>44</sup> and the images in *Plastics and Industrial Design* suggest that it was plastic's 'smooth translucency' that particularly caught his eye in this respect. They are a quite varied collection of monochrome images showing plastics in industrial, architectural and consumer applications. The most striking of them are carefully lit and composed, in a style reminiscent of the Neue Sachlichkeit photography of the 1930s, with its clean and unreal quality. Thirty-one of the sixty-eight images show transparent plastics and the lighting in many more plays up the qualities of the surfaces. Gloag seems actively to emphasise plastic's other-worldly quality to his readers, the consumers and designers of the post war period, as in the image of an acrylic brush in Figure 1 [1].

As with their earlier book, Yarsley and Couzens' *Plastics in the Service of Man* of 1956 has a postscript that locates the technical treatment of the material in the life of the times. Here, overshadowed by anxiety about nuclear destruction, they back-pedal on their 'Plastic Age' claim of 1941, which they say 'was perhaps a little extravagant',<sup>45</sup> though they continue in 'mildly proclaiming it', noting that many of their predictions have been realised—all the plastic accoutrements for children they predicted had appeared by that time. They suggest that by this point plastics' imitative character had been superseded, again characterising the progressive transition from past to present in terms of colour—the post-war generation have forgotten the 'black past'<sup>46</sup> in favour of bright plastics. *Plastics in the Modern World* of 1968 ends with a passage titled 'Envoi', which, after a short summary of what's hot in plastics in 1968, ends by asserting that plastics are 'no longer used as substitutes but in their own right'. They note plastics' uptake by fashion, quoting Mary Quant: 'We were the first people to use plastic as plastic.' 'We wanted it to look like plastic.' 'Key people in the fashion world were mad with excitement.'<sup>47</sup> By the mid-1960s plastic could be cool.

## Bright, shiny surfaces: Ideal Homes in years of austerity

In parallel with the changes in Yarsley and Couzens' accounts of the meaning of plastic, shifts are evident in the ways the materials were represented in everyday discourse, which are evident in advertisements and editorial in *Ideal Home* magazine over this period during which consumers became familiar with the materials. From at least 1949 to the late 1950s the magazine had a column called 'Items by Jean Gordon' which reviewed a selection of household goods. The magazine's intention to educate consumers through providing information was evident in other ways, including the magazine's layout. An 'Index to Advertisers' announcements' appeared on the back page from 1936 to 1950, and for 1951, having dropped the index, the back page was occupied by Jean Gordon's 'items' column. The magazine ran regular features about



**Fig 1.** Hairbrush with back of Polymethyl Methacrylate and Nylon bristles, E. I. du Pont de Nemours Co. Inc. Illustrated in J. Gloag, *Plastics and Industrial Design*, The Scientific Book Club, London, 1945, plate XXXVII. Reproduced with permission from Hagley Museum and Library

particular types of products—carpets and kitchenware for instance—as well as special supplements, such as the one devoted to plastics discussed below.

In the February 1949 issue, plastics are not much in evidence in the adverts, though there is reference to rayon textiles. This holds true for the ‘Items’ column, which reviewed two radios with wooden cabinets, a steel double steamer, a ‘plaster pencil’, two cast metal openers (for cans and jars) and an electric mousetrap. Alongside these products was a ‘Cascaphane’<sup>48</sup> plastic mixing bowl which seems to have been an early flexible Polyethylene food storage container with a lid.<sup>49</sup> The fact that the article describes the mousetrap, the openers and the mixing bowl all as ‘novelties’ suggests the rarity of plastic products at the time, as well as a lack of familiarity with the qualities of the materials. In July 1952, Jean Gordon’s selection included a set of plastic bowl covers with elasticated edges. The copy identifies both the material of the covers, Polyvinyl Chloride,<sup>50</sup> and the Cellophane<sup>51</sup> of the package they came in, which reinforces the sense that the materials were unfamiliar in all applications, both for products and for their packaging. Consumers’ relative ignorance of the materials—and their consequent indeterminacy—is indicated in other sources, such as an advice piece that appeared in *Housewife* magazine in 1952 which noted, alongside comments about the ‘many hard-wearing and beautifully designed household articles are now made from them’, that it is also ‘impossible for the ordinary person to distinguish between different types of plastic’,<sup>52</sup> a situation that persists to this day.

Along with its flexibility, Jean Gordon notes the Cascaphane bowl’s durability—suggesting that its material meant it was ‘practically indestructible’. In the early post-war period *Ideal Home* puts plastics’ durability in the foreground, particularly in respect of products made of Phenolic resins,<sup>53</sup> such as the EKCO ‘Belvedere plastic toilet seat’, which a 1952 advert boldly implies would last forever,<sup>54</sup> and Warerite plastic laminate for surfaces. In the latter case though, the material’s durability is figured as a quality that ensures that its ‘bright and shining surfaces’ persist: ‘the gaiety and colours of WAKERITE Plastics just won’t be subdued by the hustle and bustle of family life. Spill drinks over them, pile up hot or wet dishes, let grease, detergents or perfume run over them—even after this sort of harsh treatment, there’s no stain or mark that you can’t wipe away.’<sup>55</sup>

In these qualities plastics encapsulate the spirit of joyful consumption that is promoted through the pages of *Ideal Home* in this period. Often, the potential of the materials to brighten up a drab environment is summed up in copy that now seems anachronistic in its use of ‘gay’ to describe the jolly effect of plastics’ brightness and shine. All types of products, even a polythene garden trug basket, were sold for their gaiety,<sup>56</sup> and this gaiety is a consequence of their colourful surfaces.

The appearance of an issue of *Ideal Home* with a special extra ‘practical guide’<sup>57</sup> to plastics in February 1958 suggests that while the new plastics products were common by the late 1950s, they were still relatively little-understood materials. The editorial engaged directly with plastics’ ‘double’ nature, suggesting that their promotion as ‘wonder materials’ was ‘double edged’—alongside their wondrous capabilities they stimulated doubt about their authenticity, and were seen as ‘counterfeit, rather phoney’.<sup>58</sup> The guide was heavily illustrated and apparently written by a technologist explaining the materials to a lay audience, since it refers throughout to ‘plastics’. Its overall objective seems to have been to mediate between these two worlds—the technical and the everyday—through consumers’ experience of the materials that by this time they would encounter in profusion in products for the home. After a couple of pages of introduction to the main groups of plastic, the guide is structured around

types of product—furniture; fabrics; building products; kitchens and bathrooms; floors; walls. In this introduction and in the later sections the booklet links polymers and products to the companies producing them and to the range of ‘branded’ polymers they promoted.

The promotion of branded polymers was still common in this period—technical-sounding names proliferated with manufacturers perhaps hoping to follow the success of Nylon. Nylon was so familiar by 1958 that it got special treatment in the introduction to *Plastics in the Home* because it ‘has been so successful as a textile that few people think of it as a plastics [sic]’ and its ‘properties are too well known to need repeating.’<sup>59</sup> Plastics were promoted as materials in themselves, as were other materials such as enamelled steel used for kitchen furniture<sup>60</sup>—but through these adverts it is possible to see the particular qualities of plastics that were taken to be positive, and which were hoped to outweigh consumers’ doubts about their authenticity, or their durability.

An example is the June 1956 advert for Imperial Chemical Industries’ brand of polyethylene ‘Alkathene’ [2]. Alongside a lavish colour picture of a pile of colourful kitchenware, being enjoyed by the then conventional well turned out housewife, was this copy: ‘Bright, long-lasting “Alkathene” has a smooth hygienic surface that cleans easily in soapy water. It will not crack and harbour germs. Lots of lovely things are made from “Alkathene” by many manufacturers. [. . .] It’s light! It’s bright! It’s made from “Alkathene”.’<sup>61</sup>

ICI clearly had a lot invested in the potential of brightly coloured plastics to attract 1950s consumers, and devoted energy to promoting the materials as an element in a care-free consumer lifestyle made possible by their brightness and shine. Their own 1962 publication *Landmarks of the Plastics Industry* has the following comment on the polyethylene washing up bowl: ‘They are not only very serviceable, but add considerably to the colour and gaiety of the kitchen.’<sup>62</sup> Sparke sees this connection between a life of gaiety and colourful plastic surfaces as characteristic of the aestheticized consumption by females in the 1950s.<sup>63</sup> It can also be seen in an *Ideal Home* advert of April 1960 for Addis brushes [3]. The copy accompanying a colourful illustration of a balletic housewife sweeping up invisible dirt with a dustpan and brush allies the ‘cheery colours’ to the durability of the products, like the ‘plastic strongman of a dustpan’, which will ‘come up clean-as-new with a swish in sudsy water’ or a wipe with a damp cloth.<sup>64</sup> Editions of *Ideal Home* from 1960 contain several full page adverts for other plastic products that stress the qualities of the surfaces they provide and that suggest that aspects of plastic surfaces that were significant for consumers, and were therefore marketable, were congregating round certain qualities and product types. Melamine plastic as a material for surfaces was promoted as a significant finish for furniture by the late 1950s, as the advert for Berry Melamine laminate in Figure 4 demonstrates [4].<sup>65</sup> In a similar way, the advert for Decorplast melamine laminate in Figure 5<sup>66</sup> shows that the surfaces of fashionable modern furniture for the living areas of the home could bring colour and durability along with their plastic surfaces [5]. The one from later the same year in Figure 6<sup>67</sup> gives prominence to the sensual qualities of the melamine surface—it surrounds the characters in the image creating an environment with no visible margins [6]. In the spirit of Yarsley and Couzens’ ‘Plastic Man’ they are shown inhabiting a world of durable wipe-clean colour that extends over both floor and walls as a backdrop to their gracious living.

At this moment a big plastics manufacturer like ICI could both raise its corporate profile and promote sales by advertising vinyl fabric as a covering for soft furnishings [7].<sup>68</sup>

June, 1956

Ideal Home

*I started by looking for a blue bowl...*

EVERY ONE OF THEM CARRIED THIS LABEL!

IT'S EASY to match bright, gay colours when you buy house-ware made from 'Alkathene.' And you're not limited to one colour. There's a rainbow of lovely shades to choose from! 'Alkathene' is as light as a feather . . . cleans at a wipe. Never rusts. Never chips—and never chips your precious china either! Bright, long-lasting 'Alkathene' has a smooth hygienic surface that cleans easily in soapy water. It will not crack and harbour germs. Lots of lovely things are made from 'Alkathene' by many manufacturers. Whichever brand you choose, look for the label that says 'Alkathene.'

MADE FROM  
**'ALKATHENE'**  
ICI POLYTHENE

*It's light! It's bright! It's made from 'ALKATHENE'*

'Alkathene' is the registered trade mark for the polythene made by I.C.I.

IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, S.W.1

ICI

J\*\* 173

However this was not to last and by the middle of the next decade other influences were at work, which, for the readership of *Ideal Home* at least, meant plastic surfaces could no longer be promoted using a sensual rhetoric based on the promise of a perfected synthetic future. Such corporate advertisements are not evident from the mid-1960s. From this point, the progressive sensual rhetoric of the 1950s competed with another based in the qualities of natural materials. One of the regular *Ideal Home* features on kitchen furniture in the July 1965 edition includes kitchen cabinets with pine doors for the first time.<sup>69</sup>

IDEAL HOME APRIL 1960

**A**

Cleaning goes gay... light and bright... *WITH ADDIS*

**FOUR CHEERY COLOURS... STAY-CLEAN MATERIALS!**  
Choose red, green, blue or yellow... everything Addis make comes in every colour. And the colours stay bright. For tufts and quills come up clean-as-new with a swish in sudsy water... a damp cloth wipes backs and handles spotless.

There are lots of gay Addis products to lighten your work. Look for them in hardware shops or department stores today.

**Discover the joy of an Addis broom. One has silky-soft nylon tufts almost magnetic to dirt; another has stiff nylon tufts to whizz carpets clean. 18/11; matching handle, 2/6.**

**For lighter, brighter housework...**

**Addis**  
THE BRUSH PEOPLE  
BRUSHWORKS, HERTFORD

## Dubious surfaces: necessary but troubling

It was perhaps in the kitchen that the consumers of the immediate post-war period became familiar with the physical qualities of plastic, as its uses stabilised in applications which were within its physical capability, and that brought the sort of benefits that Elizabeth Shove describes in her account of the development of the polythene washing up bowl.<sup>70</sup> This stabilisation is evident in the frequency and type of full page advertisements in *Ideal Home*, which by the end of the 1950s included a proportion of



**Fig 4.** Advertisement for Berry Melamine. Reproduced from *Ideal Home*, vol. 81, no. 4, April 1960, p. 130, RIBA Library Books & Periodicals Collections

adverts for plastic products, like those in Figures 4 to 7, that remained constant up to the 1970s.<sup>71</sup> By the mid-1960s, consumers had experienced both the benefits of plastic products, as well as the occasional shortcomings of materials that under-performed; Katz<sup>72</sup> tells a plastic industry anecdote about a PVC raincoat which was seen to shatter on a very cold day in New York because it had become brittle. Public discourse at this time was also influenced by early ecological awareness, which focused on the chemical industry after Rachel Carson's *Silent Spring* publicised the widespread harm caused by the pesticides including DDT.<sup>73</sup>

By 1968 the relatively innocent curiosity about and enthusiasm for the new materials that characterised their representation in the 1950s, albeit tinged with a suspicion of

IDEAL HOME APRIL 1960

# new scope for

Here's great new opportunity  
for colour-planning —  
with furniture-plus-DECORPLAST.  
New DECORPLAST is a  
top-quality laminated plastic  
in a fresh, completely *different*  
range of colours and designs.  
And DECORPLAST is such a *practical*  
surfacing material. So easy to clean —  
so durable. It resists heat up to 310°F and  
defies cracking, chipping, fading or staining in  
any normal use. See how enchanting  
new DECORPLAST, in all its exciting variety,  
can bring new colour into *your* home.

**Reed**  
Plastics specialists in the Reed Paper Group

**Decorplast**  
LAMINATED PLASTIC  
MADE BY HOLOPLAST LIMITED, 2, CAXTON STREET, LONDON, S.W.1

**Fig 5.** Advertisement for Decorplast. Reproduced from *Ideal Home*, vol. 81, no. 4, April 1960, p. 117, RIBA Library Books & Periodicals Collections

them as cheap substitutes, had been joined by doubts about them as simple symbols of a beneficent and delightful control over nature. Fears about the relative mobility of components of plastic—particularly the plasticising chemicals used in PVC (the plastic that gave the 1960s 'wet-look' fashion), were by the early 1970s surfacing in public discourse.<sup>74</sup>

The DuPont Archive at the Hagley Library contains material from a packaging designer active then, which includes market research carried out in 1974 for a new plastic food container for the Dixeware Group. In the 'Qualitative Consumer Exploration' and 'Articulate Consumer Panel Review' that survive, consumers evaluated the proposals for a flexible plastic container that would be more effective than Tupperware by being coated on the inside to make it fully air tight.<sup>75</sup> Tupperware would by this time have



**Fig 6.** Advertisement for Decorplast. Reproduced from *Ideal Home*, vol. 82, no. 4, October 1960, p. 164, RIBA Library Books & Periodicals Collections

been familiar,<sup>76</sup> and this familiarity meant that the participants knew its shortcomings, which focused on the quality of its surfaces. The polyethylene which in the 1950s had been characterised as 'virtually indestructible', and a cousin of plastics that were equivalent to glass and ceramics in their 'hygiene', was by this time known to have a fallible surface; it absorbs the colour from foods such as tomato soup. As Koons' report put it:

the idea of a new process for 'coating' a container immediately raised either negatives or questions. They were very concerned about the nature of the coating used. In light of many current revelations regarding dangerous chemical substances presently in use, i.e., vinyl, chloride, nitrates, etc., consumers are very hesitant about accepting any new, as yet untested, chemical agents in their home environment.



**Fig 7.** Advertisement for ICI Vynair. Reproduced from *Ideal Home*, vol. 82, no. 4, October 1960, p. 146, RIBA Library Books & Periodicals Collections. Reproduced with permission from Akzonobel N.V.

The general concern was 'we do not wish to expose ourselves to any more unnecessary dangers.'<sup>77</sup>

The emergence of this 'folk knowledge' is mirrored by a change in the 'presence' of the materials in public discourse in, for instance, *Ideal Home*. In the 1960s adverts from material producers become scarce,<sup>78</sup> replaced by the promotion of plastic surfaces in settings such as the kitchen. Here, their durability and aesthetic variety had become accepted and in these adverts ideas about plastics articulate with ideas about nature, through representations of natural materials, or of natural environments, such as in the advert for Elizabeth Ann kitchens in Figure 8 [8].<sup>78</sup> A copy of the magazine from 1968, for instance, has no advertisements by the



**Fig 8.** Advertisement for Elizabeth Ann Kitchens.  
Reproduced from *Ideal Home*, vol. 92, no. 1, July 1965, p. 34, RIBA Library Books & Periodicals Collections

material producers and references to the material of plastic products are restricted to a piece about electrical equipment where it is salient to the physical function of the products, and an item about a polypropylene chair where it is salient to the status of the chair as a piece of high design. By the mid-1960s the constellation of acceptable materials for readers of *Ideal Home* was drawn from an expanded universe.

## Conclusion

The material introduced above traces elements of the transformation in the availability of plastic products and consumers' familiarity with them that took place between 1945 and 1975. It shows efforts by both the plastic industry and other opinion formers to influence people's perception of what the materials are, both by providing information about their origin and make-up and by weaving together a set of associations with them that are progressive and full of the potential for delight in consumption. These efforts to replace an understanding of plastics as 'counterfeit and a bit phoney' with a characterisation of them as both durable/dependable and full of gaiety, light and the

promise of an easy life were accompanied, by the end of the period, with concerns about their chemical origin.

These concerns themselves focused on plastic surfaces, but now instead of being glinting, shining vehicles for an immaterial and scientifically controlled gaiety these surfaces are figured as all too animate, potentially oozing poisons. The association of plastics with toxicity remains an important part of public discourse, vigorously countered by the plastics industry,<sup>80</sup> but even by the late 1960s plastics had become so embedded in the systems of provision, in packaging, and in goods themselves that such doubts about their shining surfaces cohabit with most practical aspects of everyday life in the developed world.

The principle of 'stabilisation' was introduced at the start of this article and it is possible to see in the account above both stabilization, evident in the sources discussed and in the large-scale uptake of plastics, as well as forces of de-stabilization in the doubts about their toxicity. These coexist among groups of consumers with varying degrees of 'chemophobia' as well as in individuals, who must, as Bijker and Law put it, exercise a 'tactical lack of curiosity'<sup>81</sup> about the technologies with which they interact. While plastics have 'stabilised' they not achieved 'closure' in the sense that Bijker and Law propose it,<sup>82</sup> since their polymorphous identity continues to be in play. For all the efforts to attach positive meanings to the gleam of plastic, people see behind the material's surface as it responds to the touch of the eye.

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Tom Fisher is a graduate in Fine Art and Art History from the University of Leeds and has worked as a designer and maker of furniture. He read for a PhD in the Sociology department at the University of York that concentrated on everyday experiences of plastic materials. His current research focuses on the contemporary and historical materiality of human/ object relationships and their implications for sustainability. In this he draws on his background as a maker and on perspectives from the sociology of consumption. He has recently written *Designing for Re-Use: The Life of Consumer Packaging* which reports on ethnographic work in the UK which uncovered the range of ways in which people re-use packaging. The book presents a number of ways of thinking about the phenomenon of packaging re-use, and indicates the role that design can play in promoting it.

If you have any comments to make in relation to this article, please go to the journal website on <http://jjdh.oxfordjournals.org> and access this article. There is a facility on the site for sending e-mail responses to the editorial board and other readers.

## Notes

1 J. Gloag, *Plastics and Industrial Design*, The Scientific Book Club, London, 1945, p. 26.

2 Because its focus is on experiences of plastic surfaces in everyday life, this article mainly uses the everyday term 'plastic' to denote what is a group of materials with a large range of properties. 'Plastics' is the more logical name for this group, and is the common usage in industry and

technical writing. 'Plastics' therefore appears in this article in association with such sources.

3 This article uses both UK and US sources, concentrating on the ways in which plastic surfaces played out in consumption.

4 The history of plastic suggests that thinking of them as surfaces makes sense—natural plastic, shellac, was used as

- a wood finish and the early plastics were intended as coatings from the start of their evolution. Leo Baekeland was initially looking for a varnish, and collodion, the precursor of celluloid, was a coating.
- 5 J. Meikle, *American Plastic: A Cultural History*, Rutgers University Press, New Brunswick, 1995; R. Friedel, *Pioneer Plastic: The Making and Selling of Celluloid*, University of Wisconsin Press, Madison, WI, & London, 1983; S. Fenichell, *Plastic: The Making of A Synthetic Century*, HarperCollins, London, 1996; S. Katz, *Plastics Designs and Materials*, Studio Vista, London, 1978; S. Katz, *Classic Plastics: From Bakelite to High Tech*, Thames & Hudson, London, 1984; S. Katz, *Early Plastics*, Shire, Princes Risborough, 1986; P. Sparke, *The Plastics Age, From Modernity to Postmodernity*, Victoria & Albert Museum, London, 1990; N. Whiteley, *Pop Design: From Modernism to Mod*, Design Council, London, 1987; N. Whiteley, *Classic Plastics: A Look at Design*, Fischer Fine Art, London, 1989.
  - 6 T. Fisher, Ph.D. thesis, *Plastics in Contemporary Consumption*, University of York, 2003; T. Fisher, 'What We Touch Touches Us: Materials, Affects and Affordances', *Design Issues*, vol. 20, no. 4, 2004, pp. 20–31.
  - 7 For instance G. Hawkins, 'Plastic Bags: Living with Rubbish', *International Journal of Cultural Studies*, vol. 4, no. 1, 2001, pp. 5–23; S. Freinkel, *Plastic: A Toxic Love Story*, Houghton Mifflin Harcourt, Boston, MA, 2011.
  - 8 E. Shove, M. Watson & J. Ingram, *The Design of Everyday Life*, Berg, Oxford, 2007.
  - 9 D. Howes, 'Architecture of the Senses', in *Sense of the City: An Alternate Approach to Urbanism*, M. Zardini (ed.), Lars Müller Publishers, Zurich, 2005, pp. 322–36.
  - 10 C. Classen (ed.), *The Book of Touch*, Berg, Oxford, 2005; M. Smith, *Sensory History: An Introduction*, Berg, Oxford, 2007; D. Howes, *Empire of the Senses*, Berg, Oxford, 2005.
  - 11 J. Pallasmaa, *The Eyes of the Skin*, John Wiley, Chichester, 2005.
  - 12 Ibid., p. 45
  - 13 Ibid., p. 49.
  - 14 See Freinkel, op. cit., and Meikle, op. cit.
  - 15 M. Hand & E. Shove, 'Orchestrating Concepts: Kitchen Dynamics and Regime Change in Good Housekeeping and *Ideal Home*, 1922–2002', *Home Cultures*, vol. 1, no. 3, 2004, pp. 236–56.
  - 16 They are so described in the catalogue to the Hagley Library, Wilmington, DE.
  - 17 R. Barthes, 'Plastics' in *Mythologies*, Vintage Books, London, 2009 (1972), p. 117.
  - 18 See A. Giddens, *The Consequences of Modernity*, Polity Press, London, 1990, and Z. Bauman, *Liquid Modernity*, Polity Press, London, 2000.
  - 19 See Meikle, op. cit., p. 11.
  - 20 See Meikle, op. cit.; Friedel, op. cit.; Fenichell, op. cit.; Katz, *Plastics Designs and Materials*, op. cit.; Katz, *Classic Plastics*, op. cit.; Katz, *Early Plastics*, op. cit.
  - 21 Meikle, op. cit., pp. 125–52.
  - 22 Gloag, op. cit., p. 18.
  - 23 See T. Fisher, 'Plásticos: a cultura através das atitudes em relação aos materiais artificiais' ['Plastics: seeing culture in attitudes to artificial materials'], in *Cultura, Consumo e Identidade*, L. Barbosa & C. Campbell (eds), Editora da Fundação Getulio Vargas, Rio de Janeiro, 2006, pp. 91–106.
  - 24 M. Akrich, 'The De-Scription of Technical Objects', in *Shaping Technology, Building Society: Studies in Sociotechnical Change*, W. Bijker & J. Law (eds), The M.I.T. Press, Cambridge, MA, & London, 1992, p. 221.
  - 25 *Ideal Home* is a UK home decorating magazine, published since 1920 and a source of advice for middle and upper middle class readers. It is currently published by IPC Media and its circulation in the years after the war ranged from 37,000 in 1946, rising to a stable level of approximately 200,000 by the middle of the 1950s, and peaking at 264,000 in 1955, a level that it did not reach again until the late 1980s. Source of figures: Audit Bureau of Circulations.
  - 26 Hagley archive, accession no. 2132, Box 2.
  - 27 J. A. Roberts, 'Reflections of an Unrepentant Plastiphobe: Plasticity and the STS Life', *Science as Culture*, vol. 19, no. 1, 2010, pp. 101–20.
  - 28 See Meikle, op. cit., p. 102.
  - 29 'We have at the Hoover Company the problem of selling our salesmen in the field on the use of plastics in our products. The salesman run up against competitive products using steel, aluminium or other materials, and are constantly asking us why we use plastic materials in certain applications. We know that a certain percentage of our salesmen have an antipathy towards plastics, and think of them as cheap, shoddy substitute materials. As nearly as we can learn, other companies are having similar troubles.' Letter from F. A. Martin of the Hoover Co. in SPI Public Relations committee minutes, 16 February 1949, Hagley archive, accession no. 1929, box 10.
  - 30 V. E. Yarsley & E. G. Couzens, *Plastics*, Penguin, Harmondsworth, 1941; V. E. Yarsley & E. G. Couzens, *Plastics in the Service of Man*, Penguin, Harmondsworth, 1956; V. E. Yarsley & E. G. Couzens, *Plastics in the Modern World*, Penguin, Harmondsworth, 1968.

- 31 Yarsley & Couzens, *Plastics*, op. cit., pp. 154–8.
- 32 Zappa sang: 'I'm sure that love/Will never be/A product of Plasticity' (Frank Zappa, 'Plastic People' Third Storey Music Co., 1966); Poly Styrene sang: 'I drove my polypropylene/Car on wheels of sponge/Then pulled into a wimpy bar/To have a rubber bun' (X-Ray Spex, 'The Day the World Turned Day-Glo', Styrene, 1978). The character named 'Plastic Man' who appeared in Quality Comics and later DC Comics also originated in 1941, so Yarsley & Couzens could, conceivably, have been aware of him. However for them 'man' is more likely the usage common at that time, which was intended to stand in for 'human' but rendered women invisible.
- 33 Meikle, op. cit., p. 68.
- 34 Yarsley & Couzens, *Plastics*, op. cit., p. 158.
- 35 Ibid., p. 158.
- 36 See I. Zweininger-Bargielowska, *Austerity in Britain: Rationing, Controls and Consumption 1939–1955*, Oxford University Press, Oxford, 2000, p. 124. The war's stimulus to the technical developments of plastics that would satisfy this demand is broadly indicated by the number of publications about plastics that appeared in the years before, during and after the war. The British Library catalogue shows a significant increase in publications immediately after the war—the five-year average number from 1941–1945 was seven and from 1946–1950 was seventeen, compared to two between 1936 and 1940. Although some of this 'boom' in publications would be accounted for by publishing restrictions during the war, the rate did not reach this level again until well into the 1960s.
- 37 Yarsley & Couzens, *Plastics*, op. cit., p. 154.
- 38 Yarsley & Couzens, op. cit., 1941 p. 155.
- 39 Gloag, op. cit., p. 17.
- 40 J. Gloag, *Industrial Art Explained*, George Allen & Unwin Ltd, London, 1934; J. Gloag, 'The Influence of Plastics on Design', *Journal of the Royal Society of Arts*, vol. 91, 1943, pp. 462–70.
- 41 Gloag, *Plastics and Industrial Design*, op. cit., p. 17.
- 42 Ibid.
- 43 Ibid., p. 41.
- 44 See particularly P. Sparke, *As Long as it's Pink: The Sexual Politics of Taste*, HarperCollins, London, 1995, p. 200. I. Cieraad, 'Out of my Kitchen: Architecture, Gender and Domestic Efficiency', *The Journal of Architecture*, vol. 7, no. 3, 2002, pp. 263–79; S. Cwerner & A. Metcalfe, 'Discourses and Practices of Order in the Domestic World', *Journal of Design History*, vol. 16, no. 3, 2003, pp. 229–39.
- 45 Yarsley & Couzens, *Plastics in the Service of Man*, op. cit., p. 289.
- 46 Yarsley & Couzens, *Plastics in the Service of Man*, op. cit., p. 288.
- 47 Yarsley and Couzens, *Plastics in the Modern World*, op. cit., p. 358.
- 48 This was a trade name used by Cascaloid Ltd, Leicester, UK.
- 49 'Items by Jean Gordon', *Ideal Home*, vol. 59, no. 2, February 1949, p. 54.
- 50 Polyvinyl Chloride was developed into a useable material between the two World Wars, having been first identified by a German chemist in 1872.
- 51 Cellophane was invented in Switzerland in 1900 and is a cellulose plastic film still used in packaging. Its use in packaging was impeded until the inter-war years when the material was made moisture-proof, and subsequently was used to promote cigarettes through innovative packaging.
- 52 D. Riviere, 'About the House', in 'As Sturdy as they're Pretty', *Housewife magazine*, Hulton, April 1952, p. 83.
- 53 Leo Baekeland, a Belgian chemist already wealthy from the invention of a photographic paper, invented 'Bakelite' in 1907, a 'condensation product' of Phenol and Formaldehyde—the first truly synthesised plastic. In the inter-war years when Baekeland's patent expired many competing thermoset plastics appeared.
- 54 EKCO Belvedere toilet seat advertisement, *Ideal Home*, vol. 66, no. 2, August 1952, p. 14.
- 55 EKCO Warerite plastics Advertisement, *Ideal Home*, vol. 66, no. 2, August 1952, p. 1.
- 56 Advertisement for Stewart Plastics Alkathene gardening trug that is 'washable—rot proof, & easily disinfected—smooth, even surface prevents dirt collecting—in a choice of gay colours', *Ideal Home*, vol. 77, no. 2, February 1958, p. 8.
- 57 *Plastics in the Home*, supplement to *Ideal Home*, vol. 77, no. 2, February 1958.
- 58 Editorial, ibid., p. 17.
- 59 Ibid., p. 3.
- 60 "'Leisure' Kitchen Units in stainless steel or porcelain enamel in lovely pastel colours will bring you the matchless quality and hygiene you have always wanted [ . . . ]', Advertisement for 'Leisure' kitchen units made by Wallis & Co., Long Eaton, in *Ideal Home*, vol. 66, no. 2, August 1952, p. 5.
- 61 Advertisement for ICI's 'Alkathene', *Ideal Home*, vol. 73, no. 6, June 1956, p. 173.
- 62 *I.C.I. Landmarks of the Plastics Industry*, Imperial Chemical Industries Limited, Plastics Division, London, 1962, p. 85.

- 63 Sparke, *As Long as it's Pink*, op. cit.
- 64 Advertisement for Addis brushes, *Ideal Home*, vol. 81, no. 4, April 1960, p. 117. The Addis company, formed in 1780 transferred production into plastics during the 1950s, making their last bone-handled tooth-brush in 1947 and introducing kitchen plastics and brush-ware ranges in 1955; 'History of Addis' <<http://www.addis.co.uk/our-history>> accessed 11 February 2012.
- 65 Advertisement for Berry Melamine, *Ideal Home*, vol. 81, no. 4, April 1960, p. 130.
- 66 Advertisement for Decorplast, *Ideal Home*, vol. 81. no. 4, April 1960, p. 117.
- 67 Advertisement for Decorplast, *Ideal Home*, vol. 82, no. 4, October 1960, p. 164.
- 68 Advertisement for ICI Vynair, *Ideal Home*, vol. 82, no. 4, October 1960, p. 146.
- 69 Advertisement for Elizabeth Ann Kitchens, *Ideal Home*, vol. 92, no. 1, July 1965, p. 34.
- 70 Shove *et al.*, op. cit.
- 71 A survey of editions of *Ideal Home* at five year intervals from 1945 to 1970 suggests that full-page adverts for plastic products began to appear in the mid-1950s, comprising approximately twenty percent of the total.
- 72 Katz, *Plastics Designs and Materials*, op. cit, p. 12.
- 73 R. Carson, *Silent Spring*, Hamish Hamilton, London, 1963.
- 74 Frienkel, op. cit.
- 75 Hagley archive, accession no. 2132 Box 2. The product that was proposed was a plastic container that had interchangeable lids with inserts that contained chemicals that would either humidify or desiccate the inside of the container. There is evidence in the report of a 'chemophobic' response to this aspect of the proposal: 'The question people raised most often about this concept was about the "chemical" formulation of the lids. There was apparent concern that whatever was in the lids to retain moisture or dryness could be harmful so close to food.'
- 76 A. Clarke, *Tupperware: The Promise of Plastic in 1950s America*, Smithsonian Institution Scholarly Press, Washington, DC, 1999.
- 77 Hagley archive, *ibid.*
- 78 This is based on a sample of *Ideal Home* as above.
- 79 Advertisement for Elizabeth Ann kitchens, *Ideal Home*, vol. 91, no 4, April 1965, pp. 110–11.
- 80 Freinkel, op. cit.
- 81 W. B. Bijker & J. Law, 'Introduction', in *Shaping Technology, Building Society*, op. cit., p. 2.
- 82 *Ibid.*, p. 10.